ADVERTISEMENT

© 2018 Pepperidge Farm, Incorporated.

XTRA CHEDDAR & Pretzel

TOGETHER THEY'RE

UNBEATABLE!

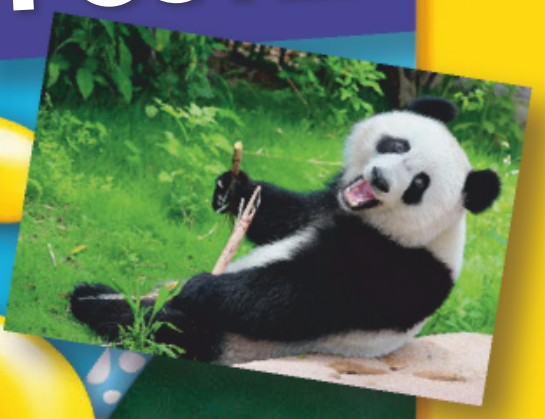
The Snack That Smiles Back®

NATIONAL GEOGRAPHIC

KiDS

Weird but true!

COOL POSTER



Sea Otters!

Planet Protectors

$4.99US $6.99CAN
08
0 70989 36821 7

NAUGHTY GECKO

SCIENCE WITH CATS

PIRATES!

NATIONAL GEOGRAPHIC KiDS

TELL US WHAT YOU THINK!

Join the *National Geographic Kids* Team.*

Throughout the year we'll invite you by email to complete our latest online survey. The surveys ask for opinions about current magazine issues, articles we're working on, and topics that affect kids like you.

Apply online!

SIGNING UP IS EASY!

1. **Grab a parent.**
2. **Go to ngkidsandfamilyteam.com/join2019. Have your parent fill out the consent form.**
3. **Look for email confirmation from *Nat Geo Kids*.**

If you have any questions, contact tracy.stone@natgeo.com.

For each survey you complete, you'll be entered into quarterly drawings to win an

AMAZON GIFT CARD!

*Children of NGS staff, NGP staff, and contractors are not eligible to participate. Only those selected will be notified. If you are already a member of the panel, you do not need to reapply.

© DAMEDEESO / DREAMSTIME

NATIONAL GEOGRAPHIC KIDS

Editor in Chief and Vice President, Kids Magazines & Digital
Rachel Buchholz
Vice President, Visual Identity
Eva Absher-Schantz
Design Director, Magazines Eileen O'Tousa-Crowson
Editorial Kay Boatner, *Senior Editor / Digital Producer;* Allyson Shaw, *Associate Editor / Digital Producer*
Photo Shannon Hibberd, *Senior Photo Editor;* Hillary Leo, *Contributing Photo Editor*
Production Sean Philpotts, *Director*
Digital Laura Goertzel, *Director;* Tirzah Weiskotten, *Video Manager*

PUBLISHED BY NATIONAL GEOGRAPHIC PARTNERS, LLC
Chairman of the Board of Directors
Peter Rice
Chief Executive Officer
Gary E. Knell
Executive Vice President and General Manager, National Geographic Media
David Miller
Senior Vice President, Kids Media, Content
Jennifer Emmett

Advertising Offices Kim Connaghan, *Vice President, Publisher* (212) 822-7431; **Detroit** Karen Sarris (248) 368-6304; **West Coast** Eric Josten (424) 292-5715
International Magazine Publishing Yulia Petrossian Boyle, *Senior Vice President;* Jennifer Jones, *Business Manager;* Rossana Stella, *Editorial Manager*
Finance Jeannette Swain, *Senior Budget Manager;* Tammi Colleary-Loach, *Senior Manager, Rights Clearance;* Pinar Taskin, *Contracts Manager*
Consumer Marketing John MacKethan, *Vice President and General Manager;* Mark Viola, *Circulation Planning Director;* Richard J. Brown, *Acquisition Director*
Market Services Tracy Hamilton Stone, *Research Manager*
Advertising Production Kristin Semeniuk, *Director;* Julie A. Ibinson, *Manager*
Publicity Kelly Forsythe, *Publicist* (202) 912-6720
Parents, contact us online: kids@natgeo.com

NATIONAL GEOGRAPHIC KIDS (ISSN 1542-3042) is published ten times a year by National Geographic Partners, LLC, Washington, DC 20036. For more information contact natgeo.com/info.

Periodical postage paid at Washington, DC, and additional mailing offices. POSTMASTER: Send address changes to **NATIONAL GEOGRAPHIC KIDS**, P.O. Box 37545, Boone, IA 50037. Subscriptions: United States, $25.00; Canada, $29.95; elsewhere, $34.95; all in U.S. funds. Single copy: United States, $4.99; Canada, $6.99 in Canadian funds or $5.75 in U.S. funds; elsewhere, $5.99 in U.S. funds or equivalent (includes postage). In Canada, Agreement number 1000010298, return undeliverable Canadian addresses to **NATIONAL GEOGRAPHIC KIDS**, P.O. Box 819 STN Main, Markham, Ontario L3P 9Z9.

The submission of photographs and other material to **NATIONAL GEOGRAPHIC KIDS** is done at the risk of the sender; **NATIONAL GEOGRAPHIC KIDS** cannot accept liability for loss or damage.

SUBSCRIBE TO NATIONAL GEOGRAPHIC KIDS!
CALL TOLL FREE 1-800-647-5463
MON.–FRI., 8 A.M.–9 P.M. EST, SAT., 9 A.M.–7 P.M. EST
For a subscription to NATIONAL GEOGRAPHIC KIDS, send written requests—including name, address, zip code, and payment in U.S. funds or equivalent—to
NATIONAL GEOGRAPHIC KIDS, P.O. BOX 37545, BOONE, IA 50037
For gift subscriptions, send giver's name and address as well as recipient's.

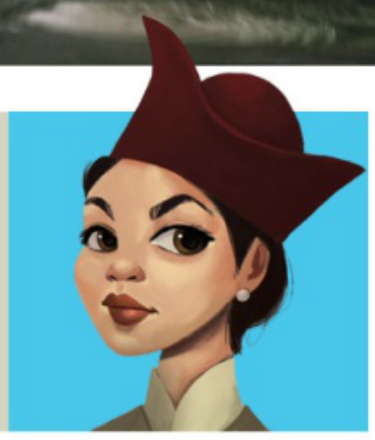
Copyright © 2019 National Geographic Partners, LLC. All rights reserved. Reproduction of the whole or any part of the contents of NATIONAL GEOGRAPHIC KIDS without written permission is prohibited. NATIONAL GEOGRAPHIC KIDS and Yellow Border: Registered Trademarks ® Marcas Registradas. Printed in the U.S.A. ISSUE 492

PRINTED ON 100% PEFC-CERTIFIED PAPER—PEFC/29-31-58—
Please recycle.

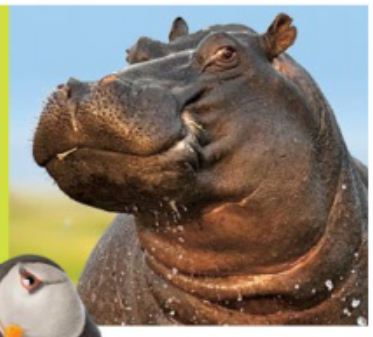
IN THIS ISSUE

12 Planet Protectors
Check out five ways sea otters are saving the Earth.

20 Pirates!
Meet six of history's most fearsome high-seas baddies.



24 Wild Crossing Guard
See how a hippopotamus helps baby animals cross a raging river.



26 30 Cool Things About Iceland
Discover facts about this country, which plays a key role in *Explorer Academy: The Falcon's Feather.*

DEPARTMENTS

4 Weird But True!
5 Guinness World Records
6 Wild Vacation
7 Bet You Didn't Know!
8 Awesome 8
10 Amazing Animals
28 Fun Stuff

FUN POSTER! PAGES 18–19

COVER: KEVIN SCHAFER / GETTY IMAGES (SEA OTTER); FOREVER HAPPY / SHUTTERSTOCK (GIANT PANDA); PETLINDMITRY / SHUTTERSTOCK (GECKO); PRETO PEROLA / SHUTTERSTOCK (KITTEN); MARÍ LOBOS (PIRATE ART). PAGE 3: SEBASTIAN KENNERKNECHT / MINDEN PICTURES (SEA OTTER); MARÍ LOBOS (PIRATE ART); TONY HEALD / NPL / MINDEN PICTURES (HIPPO); ERIC ISSELEE / SHUTTERSTOCK (PUFFIN)

JUST FOR PARENTS

EXPLORATION HAPPENS because of you.

When you read with us, you help further the work of our scientists, explorers, and educators around the world.

Parents, to learn more, visit natgeo.com/info

National Geographic Kids occasionally makes its member and subscriber lists available to reputable organizations that market their products and services through the mail. If you do not want your name and address used in this manner, you can remove it by returning this coupon.

☐ Do not make my name and address available to other organizations.

Please note that *Nat Geo Kids* will not disclose your child's name for marketing or promotional purposes.

Please include a current magazine label with this coupon, and mail your request to:
***National Geographic Kids*, Customer Service**
P.O. Box 37545, Boone, IA 50037

For corrections and clarifications, go online. **natgeo.com/corrections**

Follow us on Twitter @NGKids and like us on Facebook.

weird but true!

Check out these outrageous facts.

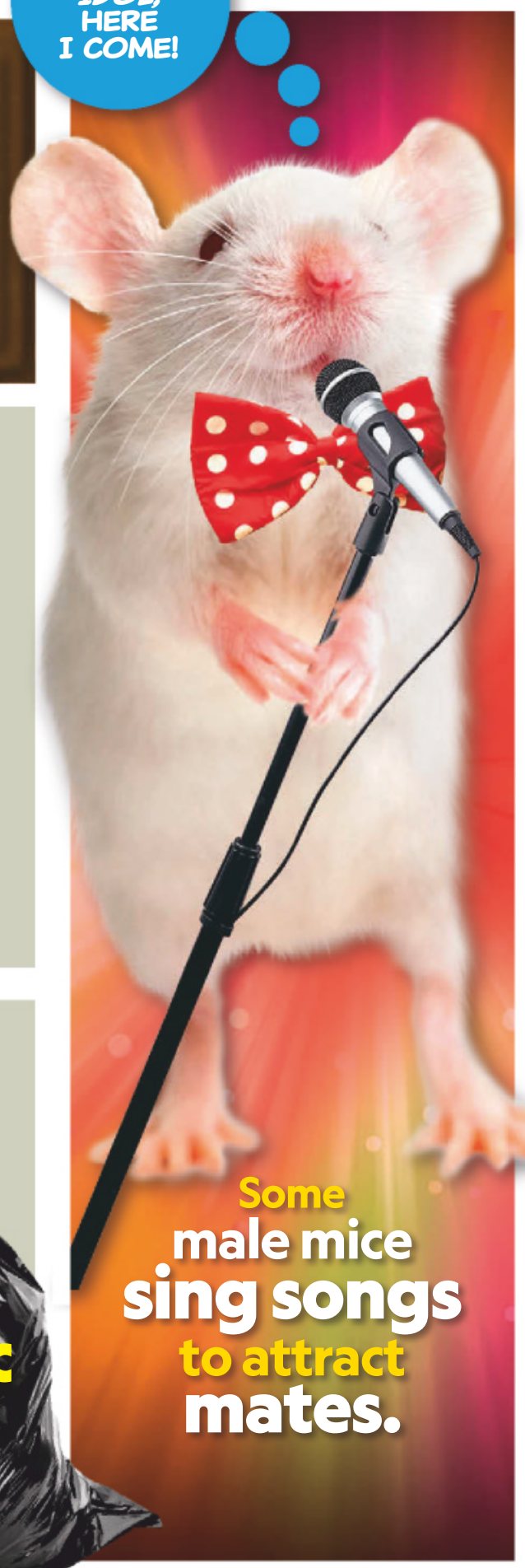
BY MARILYN TERRELL

CHECK OUT THE BOOK AND APP!

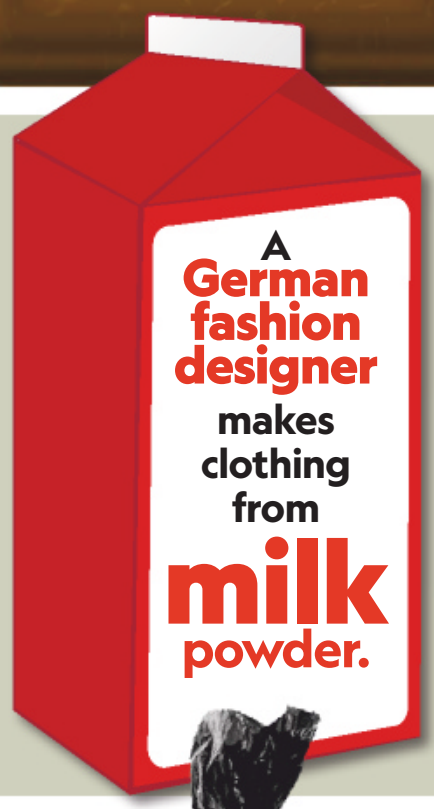
Goats snack on **poison ivy.**

A sculptor carved chairs, a table, and a sofa out of **chocolate.**

AMERICAN IDOL, HERE I COME!



A man once **blew a bubblegum bubble** that was larger than a **basketball.**



A **German fashion designer** makes clothing from **milk** powder.

Most tornadoes occur between **3 p.m.** and **9 p.m.**

In Taiwan, garbage trucks **blast music** to remind people to bring out the **trash.**

Some **male mice sing songs** to attract **mates.**

Young **giraffes** sometimes **moo.**

HELGA WIGANDT / SHUTTERSTOCK (IVY); REDMOND DURRELL / ALAMY (MOUSE), COMSTOCK / JUPITERIMAGES (BOW TIE), D. HURST / ALAMY (MICROPHONE), IMAGE DIGITALLY COMPOSED; CORBIS / SUPERSTOCK (TORNADO); FENG YU / ALAMY (TRASH BAG); SHAMSHAD KHAN / NATIONAL GEOGRAPHIC MY SHOT (GIRAFFE)

GUINNESS WORLD RECORDS

BY KAY BOATNER

SUPER-LONG TAIL

You better watch out when Keon the Irish wolfhound starts wagging his tail—because it's nearly three feet long. The pooch holds the record for the longest tail on a dog, measuring 30.2 inches long. That's almost the size of an average two-year-old kid!

SO. MANY. ICE POPS!

This guy's definitely going to get brain freeze. Kevin Strahle holds the record for the most ice pops eaten in one minute, having scarfed down six of the sweet treats. Strahle's also the titleholder for nine other extreme-eating challenges, including fastest time to drink a bottle of maple syrup and most powdered doughnuts eaten in three minutes. We're guessing he's not a picky eater.

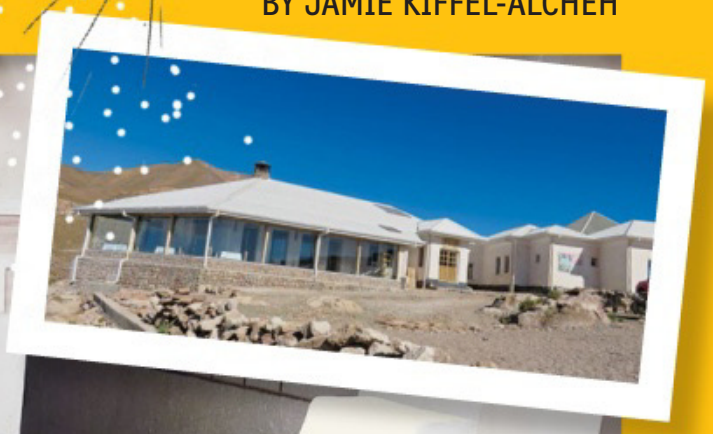
MAN JUMPS FROM DRONE

Parachute jumping from a plane is *so* yesterday. Ingus Augstkalns made history when he became the first person to perform a parachute jump from a drone. The 154-pound drone carried Augstkalns more than a thousand feet into the air before a drone pilot on the ground released Augstkalns to perform his jump. Don't try this at home: Augstkalns trained for half a year before attempting this trick.

GUINNESS WORLD RECORDS (ALL); INFORMATION PROVIDED BY © 2019 GUINNESS WORLD RECORDS LIMITED.

WILD VACATION

BY JAMIE KIFFEL-ALCHEH



EAT ON TABLES AND CHAIRS MADE OF SALT!

Salt Hotel

TAYKA HOTEL DE SAL

WHERE Tahua, Bolivia **HOW MUCH** About $130 a night **WHY IT'S COOL** You've stayed at hotels made of brick or wood. But salt? Tayka Hotel de Sal is made mostly of salt (*sal* means salt in Spanish), including some beds—though you'll sleep with regular mattresses and blankets. The hotel sits on the border of Salar de Uyuni, a prehistoric dried-up lake that's the world's biggest salt flat. Builders use the salt from the over 4,000-square-mile flat to make the bricks and glue them together with a paste of wet salt that hardens when it dries. When rain starts to dissolve the hotel, it's no problem: The owners just mix up more salt paste to strengthen the bricks.

SLEEP ON A BED MADE OF SALT!

COOL THINGS ABOUT BOLIVIA

During rainy summer months, Bolivia's Salar de Uyuni salt flat looks like a giant mirror.

The bus station in La Paz was designed by Gustav Eiffel, the same architect who built the Eiffel Tower and the Statue of Liberty.

Every August in Bolivia, dogs are honored during the Feast of St. Roch.

THINGS TO DO IN BOLIVIA

- Snag a *salteña*—a baked pastry filled with spicy meat—from a street vendor in Cochabamba.
- Take a boat to Isla del Sol, an island in Lake Titicaca, where motorized vehicles aren't allowed.
- Walk up to the Gate of the Sun, a huge stone doorway built by the ancient Tiwanaku culture.
- Dance with thousands of masked and costumed performers at the Carnival de Oruro.

TSIPILEVIN / DREAMSTIME (SALT SHAKER); RED DE HOTELES TAYKA (EXTERIOR, DINING ROOM, BEDS)

Bet You Didn't Know!

8 cool facts about wild cats

1 **Tigers** can eat more than **80 pounds** of meat in one meal—that's like eating **70 T-bone steaks!**

2 Cats see **6 times better** at **night** than **humans.**

3 A **big cat's sense of smell** is **20 times** stronger than a **human's.**

4 Each species of **big cat has a unique coat for camouflage.**

5 Most big cats **roar;** most small cats **purr.**

6 The **Bengal tiger** is **India's** national animal.

7 A **cheetah** can **accelerate faster** than a **race car.**

8 A **puma** is also called a **mountain lion,** a **panther,** and a **cougar.**

For more fun facts, watch *Things You Wanna Know.* natgeokids.com/august

THINGS YOU WANNA KNOW

COLETTE3 / SHUTTERSTOCK

awes8me

Bizarre Beaches

THE WORLD'S COOLEST COASTLINES OFFER SO MUCH MORE THAN SANDY SHORES.

1 FOR THE BIRDS

WHAT Boulders Beach **WHERE** Simon's Town, South Africa **WHY IT'S BIZARRE** You might expect to see penguins on an icy coast. But these birds like it hot! African penguins splash in the warm waters of this national park next to 540-million-year-old granite boulders.

2 HIDE-AND-BEACH

WHAT Hidden Beach **WHERE** Marieta Islands, Mexico **WHY IT'S BIZARRE** Tucked inside a crater, this spot might have been formed in the early 1900s when the Mexican government was testing military weapons on these then-uninhabited islands. It's so secluded you can only reach the beach by first swimming through a 40-foot-long rock tunnel.

3 BLACK OUT

WHAT Punaluu Black Sand Beach **WHERE** Big Island, Hawaii **WHY IT'S BIZARRE** The jet-black sand on this skinny stretch of beach is made up of tiny bits of hardened lava, produced over centuries by the nearby (and still active) Kilauea volcano. This cool spot is also a popular nesting place for hawksbill and green sea turtles.

IAN CUMMING / AXIOM PHOTOGRAPHIC / NEWSCOM (1); JUSTIN LEWIS / GETTY IMAGES (2); DANITA DELIMONT / ALAMY (3);

Watch more in the video series *Awesome 8.* natgeokids.com/Awesome8-videos

BY JULIE BEER AND MICHELLE HARRIS

4 TIP OFF

WHAT Zlatni Rat **WHERE** Bol, Croatia, in Europe **WHY IT'S BIZARRE** This narrow beach is a real shape-shifter. Its tip—which sticks out as much as 1,640 feet into the crystal blue water—shifts in different directions as a result of wind, waves, and currents.

5 HAVING A BALL

WHAT Bowling Ball Beach **WHERE** Mendocino County, California **WHY IT'S BIZARRE** Resembling oversize bowling balls, the round stones that line the coast in this state park are known as concretions: They're made when minerals bind to grains of sand before the rest of the rock erodes.

6 TICKLED PINK

WHAT Pink Sand Beach **WHERE** Harbour Island, Bahamas **WHY IT'S BIZARRE** Crushed-up coral, clams, and other small-shelled invertebrates create a grainy, pale pink sand that covers stretches of shore on this island. Pink sand beaches can also be found in Bermuda, Indonesia, Crete, and the Seychelles Islands in the Indian Ocean.

7 COOL POOLS

WHAT Genipabu **WHERE** Natal, Brazil **WHY IT'S BIZARRE** Somewhere between Brazil's tallest sand dunes you'll find these freshwater lagoons, their deep-blue water a shocking contrast against the bright white peaks. Looking for adventure? Leap from a trapeze on the dunes into the sparkling water below.

8 GLASS FROM THE PAST

WHAT Glass Beach **WHERE** Fort Bragg, California **WHY IT'S BIZARRE** Decades ago, the water along this beach was a dumping ground for glass bottles and other debris. Now, what was once tossed in the ocean has now washed up as a rainbow of shimmering sea glass covering the coves.

GARDEL BERTRAND / GETTY IMAGES (4); BILDAGENTUR GEDULDIG / ALAMY (5); M. SOBREIRA / ALAMY (6); SUE CUNNINGHAM PHOTOGRAPHIC / ALAMY (7); ARTYALISON / GETTY IMAGES (8)

AMAZING ANIMALS

Gecko Makes Prank Calls

AN ADULT GOLD-DUST DAY GECKO IS ABOUT AS LONG AS A TOILET-PAPER TUBE.

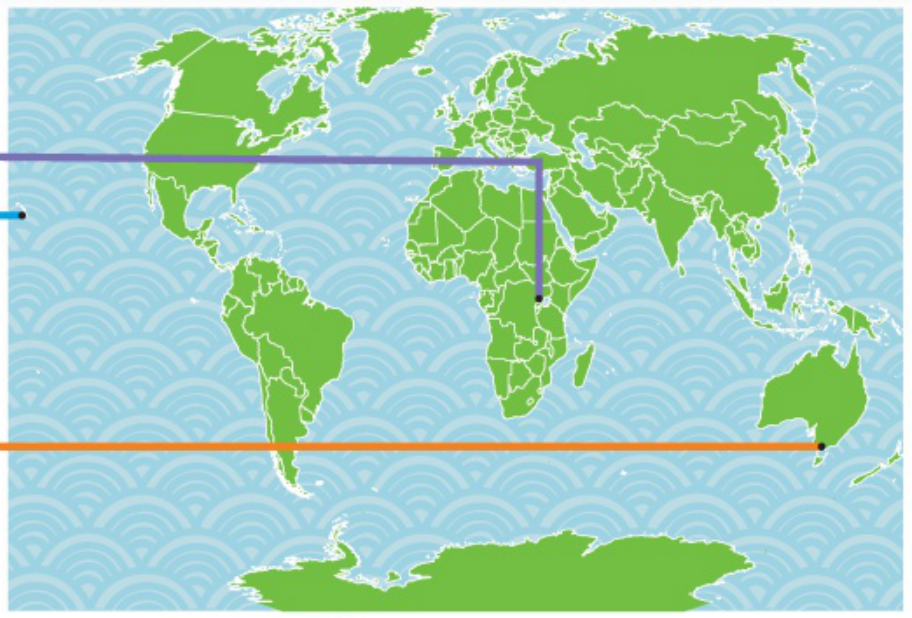
Kailua-Kona, Hawaii
When veterinarian Claire Simeone received nearly a dozen mysterious, silent phone calls from the Marine Mammal Center's Hawaiian monk seal hospital, Ke Kai Ola, she worried it might be an emergency. But back at the clinic, nobody admitted to calling her. So Simeone, who's also the hospital's director, searched through each room until she found the prank caller: a gold-dust day gecko lounging on the touch screen of a telephone.

After sneaking into the hospital, the lizard was probably attracted by the bright screen. Then the cold-blooded creature stuck around to soak up the phone's warmth, reptile expert Ron Tremper says. The gecko's feet—covered in tiny hairs that help it grip leaves and branches—pressed against the touch screen like human fingertips. "Every time it moved its feet, the gecko called another person—including me," Simeone says.

Simeone eventually moved the jokester outside, where it can sit in warm spots—without ringing up expensive phone bills.

—Elizabeth Hilfrank

CLAIRE SIMEONE © THE MARINE MAMMAL CENTER (GECKO ON PHONE); PETLINDMITRY / SHUTTERSTOCK (GECKO, MAIN); NEWSPIX / TREVOR PINDER (GRAEME); ANDY ROUSE / GETTY IMAGES (GORILLA)



Cat Waits for Train

Melbourne, Australia
Graeme the cat didn't hang out at home waiting for his owner, Nichole O'Duffy, to return from work at the end of the day. Instead, he headed to the train station to meet her.

"One day Graeme just showed up," says O'Duffy, who adopted the cat from a friend. Soon Graeme was seeing off his owner each morning and returning for her in the evening. As he waited, the feline enjoyed pats from other commuters. Then when the train pulled in and the doors opened, he sat patiently behind the yellow safety line.

Experts can't completely explain Graeme's behavior. "Cats possess superb memories and like having a routine," veterinarian Amber Andersen says. "But Graeme's story is extraordinary." Wonder if he made airport pickups too?

—Sarah Wassner Flynn

THE PLATFORM WAS GRAEME'S HANGOUT HOT SPOT.

Gorillas Groom Tourist

Southwestern Uganda
Talk about a wild experience. Wildlife photographer John King was standing outside a visitor lodge that borders Bwindi Impenetrable National Park when a family of apes appeared. As he knelt down to take pictures, three young gorillas approached. They spent the next few minutes grooming him. "Their touch was so humanlike and gentle," King says.

Hungry gorillas within the park occasionally come near the lodge looking for wild celery that grows nearby. But tourists don't interact with the apes, and before this, none of the gorillas had been seen coming so close to humans at the camp. What drew the apes to King? "Young gorillas are like curious kids," says Craig Sholley of the African Wildlife Foundation. "They enjoy inspecting the world around them." King adds, "They made me feel like one of the gang."

—Sarah Wassner Flynn

PLANET PROTECTORS

5 WAYS SEA OTTERS ARE SAVING THE EARTH

BY JAMIE KIFFEL-ALCHEH

A sea otter mama feeding her pup a sea urchin might not seem like a big deal. But these marine mammals' meals are actually helping protect their environment. Read on to find out some surprising ways sea otters are saving the planet.

A SEA OTTER MUNCHES ON A DUNGENESS CRAB.

1 POLLUTION PREVENTERS

A sea otter watches a crab scuttle across a mud bank at the Elkhorn Slough Reserve, an estuary in Monterey Bay, California. (An estuary is where the ocean meets a river.) The otter drags its body across the mud with its forepaws, then ... *snatch!* It grabs the crab and chows down.

Sea otters use their stomachs as plates when they eat.

I'VE GOT YOUR BACK, PLANET EARTH.

2

SEASHORE DEFENDERS

A sea otter wiggles out of the water in the Elkhorn Slough estuary and plops down near some pickleweed, a flowering plant that helps keep the banks strong. Then, the sea otter poops.

It sounds gross, but it's a great thing for the environment. "Sea otter feces is an excellent fertilizer for the pickleweed," says Michelle Staedler, the sea otter program manager at the Monterey Bay Aquarium in California. "Harbor seals poop near pickleweed too," Staedler says. "But harbor seals are heavier, and they end up flattening the plants. Pickleweed grows faster and healthier when fertilized by otter poop."

Healthy pickleweed roots strengthen the mud banks. "Without the plants, the banks could collapse when water rushes in," Staedler says. That can lead to coastline erosion, which is when the ocean washes away chunks of land. So a pile of sea otter poop might not seem appealing—but it makes for a more stable habitat.

Believe it or not, this sea otter meal helps prevent pollution in the estuary. Eelgrass, a kind of seagrass that grows in the habitat, filters out pollution from water flowing into the estuary. The eelgrass thrives with just the right amount of algae in the environment—too much algae can smother the grass. Crabs eat sea slugs that eat the algae.

If sea otters didn't eat the crabs, the crabs would eat too many sea slugs. Too few sea slugs would mean too much algae. That would harm the seagrass, resulting in pollution for Elkhorn Slough and similar ocean habitats.

SEBASTIAN KENNERKNECHT / MINDEN PICTURES (MAIN); CHASE DEKKER WILD-LIFE IMAGES (POLLUTION PREVENTERS); SUZI ESZTERHAS / MINDEN PICTURES (SEASHORE DEFENDERS); MARTIN WALZ (MAP)

SEA OTTERS OFTEN WRAP THEMSELVES IN KELP SO THEY DON'T DRIFT AWAY WHILE SLEEPING.

Its **tail** steers the otter through the water as it chases its prey.

A sea otter's **back feet** are webbed (sort of like duck feet) to help the otter swim and dive for food.

3 HABITAT HEROES

A sea otter darts through a tall, leafy kelp forest off the coast of western Canada, swimming past yellow rockfish, colorful sea stars, and spindly sea urchins. "Diving into a kelp forest feels like being in a bustling city," marine ecologist Douglas Rasher says. "Seals, sea lions, and fish are swirling around."

This environment would look totally different if sea otters weren't there. For instance, centuries ago sea otters in the Aleutian Islands off Alaska's southwest coast were nearly hunted to extinction. "Today it's a barren landscape," Rasher says. "Much of the forest-dwelling life is gone."

How did the disappearance of one animal practically kill off an entire habitat? Well, sea otters eat a lot of urchins, up to 1,500 in a day. And urchins eat kelp. When the sea otters disappeared, the urchin population exploded—and removed entire kelp forests.

This is why biodiversity—a mix of different species in an area—is important to a healthy habitat. The Aleutian Islands' kelp forests are gone, but other kelp forests around the world provide homes to thousands of other species—and they depend on sea otters to keep the urchins under control so the forests can thrive.

Discover how sea otters can be affected by plastic—plus, learn how to make a paper straw.
natgeokids.com/KidsVsPlastic

4 GLOBAL WARMING WARRIORS

A polar bear walks slowly across an Arctic ice floe, which is melting and cracking beneath the bear. The ice might be becoming more unsteady as a result of a process called global warming.

Most scientists agree that global warming—the increase in Earth's average temperature over a very long period of time—is caused by something called the greenhouse effect. That occurs when gases such as carbon dioxide (from things like cars and factories) trap heat from the sun that would normally escape from our atmosphere. That means the Earth can become too warm, which can lead to

BUILT FOR HUNTING

A full-grown sea otter is about the size of an 11-year-old kid—but a whole lot tougher. Find out how this marine mammal's body is perfect for finding food in the water.

Nostrils close underwater to keep out salt water while an otter dives for prey.

Excellent **eyesight** allows the otter to find food below the water's surface.

Its strong **mouth** can crack open a mussel shell; razor-sharp teeth tear off bits of food.

On average, a sea otter eats 10 pounds of food each day.

things such as melting Arctic ice.

But sea otters might help decrease some of those effects. Like trees on land, kelp forests—where sea otters thrive—absorb carbon dioxide, then release it back into the atmosphere as oxygen. That means there's less carbon dioxide in the atmosphere to trap heat.

Areas of the ocean with kelp forests can absorb more than double the amount of carbon dioxide than areas without kelp forests. So because a kelp forest's ability to thrive depends heavily on sea otters, these critters are indirectly helping to keep the planet healthy.

A NEW SEA OTTER PREDATOR?

THE PROBLEM Scientists are stumped by an increasing threat to California's sea otters: great white sharks.

THE QUESTION Otters aren't normally on a shark's menu. But recently they've been taking a bite anyway. "We think most of these interactions are investigative bites," says Mike Harris, a senior environmental scientist at the California Department of Fish and Wildlife. Unfortunately for the otters, a nip from a shark can be deadly. Experts think these bites are on the rise because—among other reasons—great whites are a protected species in California, so more roam the area than in the past.

THE SOLUTIONS Experts like Harris are working on ways to protect the sea otters from great whites. In the meantime, you can help protect the otters too. "Kelp forests camouflage sea otters from sharks, so keeping these forests healthy helps," Harris says. "Recycling and reusing items keeps pollution out of the ocean—and out of the otters' habitat."

Sea otters aren't the only diving creatures. Check out this video about a submarine pilot. **ExplorerAcademy.com/TruthBehind-videos**

HOTSHOTSWORLDWIDE / DREAMSTIME (OTTER IN KELP); DOMINIQUE BRAUD / DEMBINSKY PHOTO ASSOCIATES / ALAMY (BUILT FOR HUNTING); WILDEST ANIMAL / SHUTTERSTOCK (SHARK)

5

LIFE SAVERS

A PUP RESTS ON ITS MOTHER'S TUMMY.

When a group of sea otters in the Pacific Ocean started suffering from heart disease, scientists were stumped. To solve the mystery, they examined the animals in their central California coastal habitat. What they found was a dangerous toxin, produced by an explosion of algae, that was sickening the otters.

"After we discovered the toxin in otters, we made the connection between blooms of this algae and the otters' heart conditions," says Christine Kreuder Johnson, a researcher at the University of California, Davis. "Thanks to the otters, we knew about the extent of the toxic algae in coastal waters and could look into its impact on other animals too." (Experts suspect environmental conditions, such as change in ocean temperature and nutrient levels, were likely the cause of the excess algae, but the cause of what's producing the toxin is still a mystery.)

Sea otters eat a lot—and a lot of *different* foods—so they're more likely than other animals to ingest something dangerous. And because otters don't travel much, scientists can keep a close eye on odd behavior. That's why otters are called indicator species—they're among the first to react to environmental changes. "Sea otters have helped us solve several environmental mysteries," Johnson says.

Sea otters live in colonies that can include over a thousand individuals.

FIND OUT HOW YOU CAN PROTECT THE PLANET.
natgeokids.com/SaveTheEarth

SUZI ESZTERHAS / MINDEN PICTURES (MOM AND PUP); ROLF HICKER PHOTOGRAPHY / ALAMY (SEA OTTER COLONY); MIKELANE45 / DREAMSTIME (ARCTIC FOX); DANITA DELIMONT / GETTY IMAGES (SEA OTTER ON SNOW). FOREVER HAPPY / SHUTTERSTOCK (GIANT PANDA, PAGES 18-19)

ANIMAL SHOWDOWN

Both of these animals are known for their cuddly coats. But which truly deserves the title of the fluffiest?

ARCTIC FOX

WHERE THEY LIVE

The Arctic

DOUBLE FLUFF

The arctic fox's coat has two layers: Beneath the long, outside hairs, there's another layer of soft hairs tightly packed together. This system traps a layer of warm air next to the skin to keep the fox toasty in the winter.

COAT NOTES

An arctic fox's coat can change with the weather. In summer, their fur is brown or gray to match the rocky ground. In the winter, it turns pure white to blend in with the snow.

THE HAIR THERE

An arctic fox has an impressively dense coat, with about 130,000 hairs per square inch. (In comparison, humans have only about 100,000 hairs on their entire head.)

VS.

SEA OTTER

WHERE THEY LIVE

Pacific Ocean

DOUBLE FLUFF

A sea otter's coat is also made up of two layers: an inner one that traps air to keep them warm, plus an outer water-repellent layer that keeps its skin dry from the chilly ocean.

COAT NOTES

To keep their coats waterproof, otters spend about five to six hours each day grooming their fur.

THE HAIR THERE

Sea otters have an incredible 900,000 hairs per square inch on their coat.

WINNER: SEA OTTER

Sure, arctic foxes are fluffy ... but sea otters undoubtedly have the thickest coat in the animal kingdom. They take the crown in this showdown!

CHECK OUT THIS BOOK!

NATIONAL GEOGRAPHIC KiDS

Giant pandas might appear roly-poly, but they're nimble enough to scale 75-foot fir trees.

eat about 20 to 40 pounds of bamboo a day in their China home.

Giant pandas are good swimmers.

PiRATE

MEET SIX OF HISTORY'S MOST FEARSOME HIGH-SEAS BADDIES.

BY SARA LORIMER AND JAMIE KIFFEL-ALCHEH
PIRATE PORTRAITS BY MARÍ LOBOS

Yo-ho, yo-ho—*uh-oh!* A mysterious ship on the horizon flying a skull-and-crossbones flag wasn't a welcome sight to sailors in the 18th and 19th centuries. That flag meant one thing: pirates. Faced with faster, cannon-crammed vessels typically crewed by pirates, a ship captain was left with two choices: lower their sails and surrender—or turn and fight.

Life wasn't one big swashbuckling adventure for the pirates, however. Lousy food, cramped quarters, stinky crewmates, and hurricanes were all part of the job. Still, a handful of pirates managed to enjoy success at sea ... and inspired fear in those who were unfortunate enough to meet them face-to-face. Check out some of history's most famous pirates.

RACHEL WALL

REIGN OF TERROR **New England coast, late 1700s**

Rachel Wall and her husband, George, worked together as pirates, targeting small islands off the coast of Maine in the Atlantic Ocean. After storms, they'd stop their sailboat and raise a distress flag. When passersby responded to Rachel's screams for help, they were robbed—or worse—for their trouble. After just two summers of piracy, Rachel and George killed at least 24 men and raked in about $6,000, plus an unknown amount of valuable goods. They later sold their loot, pretending they found it washed up on a beach.

CRIME DOESN'T PAY Eventually the law caught up with Rachel Wall. In 1789 she made history when she was the last woman to be hanged in the state of Massachusetts.

MATJAZ SLANIC / GETTY IMAGES (SHIP BACKGROUND); ECOASIS / SHUTTERSTOCK (PARCHMENT PAPER, INTRO); IAKOV FILIMONOV / SHUTTERSTOCK (GOLD FRAME, RACHEL WALL AND BLACKBEARD); WINTERLING I DREAMSTIME.COM / DREAMSTIME (GOLD FRAME, CHENG I SAO); VAL LAWLESS / SHUTTERSTOCK (PARCHMENT PAPER, PIRATES, ALL)

ES!

CHENG I SAO

REIGN OF TERROR **South China Sea, 1801-1810**

Cheng I Sao ruled a pirate fleet of nearly 2,000 ships. Sometimes called Madame Cheng, she turned to crime after she married a famous pirate. More than 80,000 buccaneers—men, women, and even children—reported to Madame Cheng. They seized loot in all sorts of ways: selling "protection" from pirate attacks, raiding ships, and kidnapping for ransom. Madame Cheng was best known for paying her pirates cash for each head they brought back from their assaults. (Yikes!)

CRIME DOESN'T PAY—USUALLY Every government attempt to stop Madame Cheng was a failure. Rumor has it that after she retired from piracy, she started a second career as a smuggler. She died peacefully at age 69.

BLACKBEARD

REIGN OF TERROR **North America's East Coast and the Caribbean, 1713-1718**

Nobody knows Blackbeard's real name—historians think it might've been Edward Teach—but he's arguably history's most famous pirate. He began his career as a privateer, or a kind of legal pirate, who was hired by the British government to attack enemy fleets and steal their goods.

Blackbeard abandoned privateering in 1713 and went full-pirate when he sailed to the Caribbean on a French ship that was gifted to him by another pirate, adding cannons to the vessel and renaming it *Queen Anne's Revenge*. He terrified his enemies by strapping pistols and knives across his chest and sticking smoking cannon fuses in his beard. According to legend, Blackbeard hid a treasure somewhere ... but it's never been found.

CRIME DOESN'T PAY A few years into Blackbeard's time as a pirate, he was nabbed by the British Navy. They executed him and stuck his head on the front of a ship as a way to warn wannabe pirates from turning to the profession.

MARY READ AND ANNE BONNY

REIGN OF TERROR **The Caribbean, early 1700s**

Mary Read needed money after her husband suddenly passed away in England. So she signed up to be a sailor on a merchant ship heading to the West Indies in the Caribbean Sea. But when her ship reached the islands, English pirates raided it. They gave Read a choice: Join them or be killed. She officially turned pirate.

Read later met Anne Bonny, who had run away to sea with a pirate named Calico Jack. Both women ended up on Jack's ship, and together they attacked other English boats, mostly stealing items like fishing gear and food. Despite their small-time plundering, the English authorities issued a proclamation declaring the two women "Enemies to the Crown of Great Britain."

CRIME DOESN'T PAY Mary Read and Anne Bonny were captured in 1720. Read died of fever while she was in prison; what happened to Bonny remains a mystery.

PEDRO GIBERT

REIGN OF TERROR
North America's East Coast, 1830-1835

Born in South America, "Don Pedro," as Gibert called himself, started out as a privateer for the Colombian government. But he soon turned to piracy. Gibert's crew would dock his ship, called the *Panda*, in a shallow area and hide in nearby coves and lagoons, waiting to ambush unsuspecting sailors who arrived to investigate the empty ship.

Gibert's most famous attack was on a U.S. ship called the *Mexican*, from which his crew stole about $20,000 worth of silver. Instead of, um, getting rid of the crew like they normally did, Gibert's men tied up the crew below the deck and set fire to the ship. But some crew members escaped and put out the fire. They quickly sailed home and alerted authorities of Gibert's location.

CRIME DOESN'T PAY After the *Mexican* attack, the British Navy caught up with Gibert, and about 20,000 people came to watch him hang. But part of Gibert's stolen silver loot was never found.

IAKOV FILIMONOV / SHUTTERSTOCK (GOLD FRAME, BOTH); VAL LAWLESS / SHUTTERSTOCK (PARCHMENT PAPER, PIRATES, BOTH); IMAGE SOURCE (TREASURE CHEST); INGRAM (ARR! PIRATE); PINGEBAT / SHUTTERSTOCK (TREASURE MAP); WHITEMAY / GETTY IMAGES (PLANK WALK)

BE A HERO—TAKE THIS QUIZ!
natgeokids.com/august

PIRATE MYTHS BUSTED!

"SHIVER ME TIMBERS!" said pirates ... or did they? (They didn't.) It turns out a lot of pirate legends were just that: legends. Get the lowdown on three pirate myths.

1

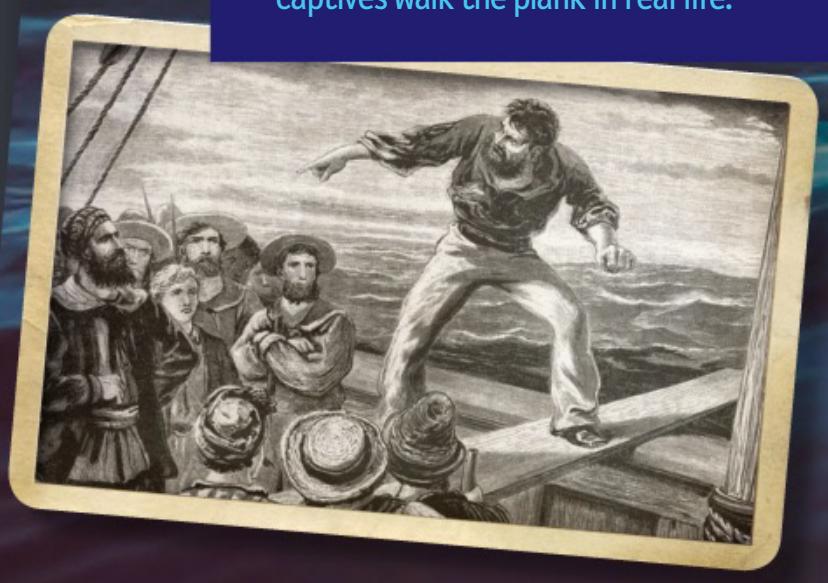
MYTH: Pirates made treasure maps showing where they buried their loot.
BUSTED! No pirate treasure maps have ever been found. And since each crew member expected to get paid after an expedition, they usually split up their loot instead of burying it. Old Hollywood movies such as *Treasure Island* have been blamed for starting this myth.

2

MYTH: Pirates said "*arr*" and "*matey*" all the time.
BUSTED! You can blame Hollywood for this myth too. English actors in 1950s pirate films overdid it a bit on their pirate slang, and their exaggerated take on "pirate speak" stuck. No evidence proves that real pirates said "*arr*" or "matey" very much.

3

MYTH: All pirates made their captives walk the plank.
BUSTED! Pirates *did* force captives out on the water—they just didn't use planks. According to the 1724 book *A General History of the Pyrates*, ancient Mediterranean pirates ran a ship's ladder over the water and informed captives they were free to go ... if they were up for a long swim. Eventually, fiction authors turned the ladder into a plank, which was likely the inspiration for a handful of late 18th-century pirates making their captives walk the plank in real life.



Enough about the villains. Check out these books to discover some of history's greatest guys and girls.

wild CROSSING GUARD

A HIPPOPOTAMUS HELPS BABY ANIMALS CROSS A RAGING RIVER. BY KAREN DE SEVE

It's rush hour in Africa. Every October, thousands of wildebeest and zebras gather along the banks of the Mara River. They wait to cross the deep, rushing waters as part of their seasonal journey from the Masai Mara National Reserve in Kenya to the Serengeti National Park in Tanzania. The river flows so fast that full-grown animals struggle to swim to the other side. "When the river is full, lots of animals drown trying to cross," says Tom Yule, who ran the nearby Lemala Mara safari camp. Watching from the river's edge, Yule sees a wildebeest calf and later a zebra foal jump into the water. But he doesn't expect what happens next.

1

The little wildebeest tries to paddle across the river but is swept away by the strong current. The calf tries to keep its head above water while floating downstream. Suddenly something rises out of the water: a large, dark head followed by the hulking body of a hippopotamus. "The hippo was lying in the water near where the animals jump in, and it immediately goes after the calf," Yule says. Hippos can be very aggressive and even deadly when defending territory, so he wonders whether the hippo will attack the baby wildebeest.

2

The strong hippo defies the current and uses its body to stop the wildebeest calf's scary ride downstream. Like a tugboat guiding a ship filled with precious cargo, the hippo shepherds the youngster to the other side of the river. Yule and other bystanders watch in disbelief. "I have never witnessed anything like this," he says. The wildebeest reaches the opposite bank and runs back upstream to rejoin its herd.

18+

WHAT IS AVAXHOME?

AVAXHOME-

the biggest Internet portal, providing you various content: brand new books, trending movies, fresh magazines, hot games, recent software, latest music releases.

Unlimited satisfaction one low price
Cheap constant access to piping hot media
Protect your downloadings from Big brother
Safer, than torrent-trackers

18 years of seamless operation and our users' satisfaction

All languages
Brand new content
One site

AVXLIVE.ICU

AvaxHome - Your End Place

We have everything for all of your needs. Just open https://avxlive.icu

3

Yule thinks the drama is over when suddenly the river grabs hold of a small zebra foal. He watches as the tiny striped head dips underwater and then resurfaces. Just when it looks like the zebra won't make it, the hippo suddenly appears. Again, the huge hippo helps the baby across to the shallow water on the other side. But the exhausted foal can barely stand. Gently, the hippo nudges the zebra into a safe nook between two large rocks. "The hippo gets out of the water and starts to nuzzle the foal with its great jaws," Yule says. "And then the hippo coaxes the zebra to cross a small channel and climb up the slope of the opposite bank to its mom."

4

Yule thinks the hippo would be too exhausted for any more superhero moments. But instead it settles back into the river to keep a watchful eye. "Animals are unpredictable, and each one has its own unique personality," Yule says. "This hippo's instincts are to help those that need assistance. It's just like protective people who say, 'Not on my watch!' as they help others."

WATCH A MUSIC VIDEO FEATURING THE SOUNDS OF THE SAVANNA!
natgeokids.com/WildBeats

TONY HEALD / NPL / MINDEN PICTURES (HIPPO, MAIN); MATTHEW TABACCOS / BARCROFT MEDIA / GETTY IMAGES (HIPPO WITH ANIMALS, ALL)

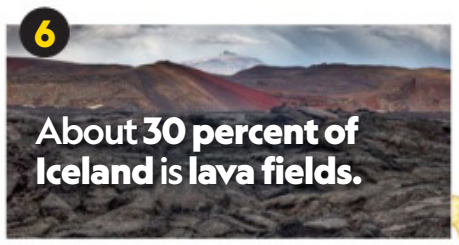
1 Brought by **Viking settlers** over 1,000 years ago, **Icelandic horses** are known for their ability to cross the country's challenging lava and ice fields.

2 **Sky-high ash** from an eruption of the **Eyjafjallajökull** (pronounced AY-yah-fyah-lah-YOH-kuh-duhl) **volcano** halted European air traffic for a week in 2010.

3 Nearly **30 percent of electricity** here is generated by **geothermal power,** which comes from **groundwater heated by molten rock** deep inside the Earth's crust.

4 This island is home to the world's **northern-most capital city, Reykjavík** (pronounced RAY-kee-yah-vik).

5 Iceland has **no forests.**

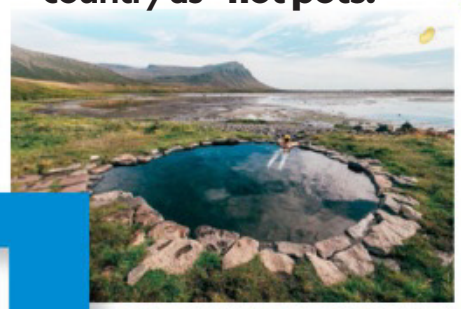


6 About **30 percent of Iceland** is **lava fields.**

7 Puffins nest by the millions atop the **Látrabjarg Cliffs,** Iceland's westernmost point.

8 Icelanders sit and soak at the **outdoor Blue Lagoon spa,** where the mud and water is heated by a nearby **geothermal power plant.**

9 Icelanders refer to the **hundreds of outdoor hot springs** in their country as **"hot pots."**



30 Cool THINGS ABOUT

Discover facts about this country, which plays a key role in *Explorer Academy: The Falcon's*

10 More than **half of the population** believes in the **existence of elves.**

11 **Reynisfjara Beach** in southern Iceland is famous for its **black sand.**

12 **Explorer Academy character Bryndis Jónsdóttir's** favorite dish from her Iceland home is **geyser bread.** The treat is baked in pots buried in the ground near **hot springs,** where the heat bakes the bread **in about a day.**

13 More than **20 different types of whales** can be found near Iceland, including **right whales,** which Cruz Coronado "talks" to underwater in ***Explorer Academy: The Falcon's Feather.***

14 **In medieval Iceland** it was illegal for women to **cut their hair short.**

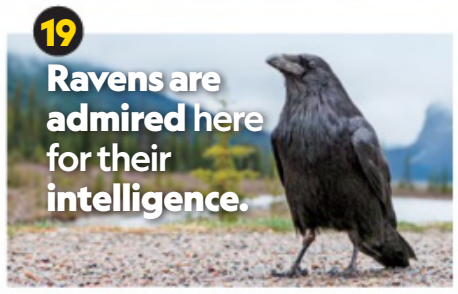
15 Iceland's **Strokkur geyser** erupts about **once every 4 to 10 minutes.**

ZYSMAN / ISTOCKPHOTO / GETTY IMAGES (1); HANS STRAND / GETTY IMAGES (2); ILLPOS / SHUTTERSTOCK (4); ENOTE / SHUTTERSTOCK (6); ERIC ISSELEE / SHUTTERSTOCK (7); SERGEY DIDENKO / SHUTTERSTOCK (8); ATTILIO PREGNOLATO / SHUTTERSTOCK (9); PHOTO BY AMBERLAIR BOUTIQUE HOTELS (10); ARTO TUOMINEN / DREAMSTIME (11); ARCTIC IMAGES / ALAMY (12); RM / SHUTTERSTOCK (13); AARON AMAT / SHUTTERSTOCK (14); KAVRAM / SHUTTERSTOCK (15)

16 The **Icelandic sheepdog** is known as the **"Dog of the Vikings"** because these early explorers brought the breed over from Norway.

17 Some **800,000 sheep** live in Iceland—**twice the number of people** who live there.

18 More people live in the city of **Tampa, Florida,** than on the **entire island of Iceland.**



19 **Ravens are admired** here for their **intelligence.**

20 Iceland's nickname, **the Land of Fire and Ice,** refers to the island's many **ice caps** (a thick layer of ice on land) and **volcanoes.**

21 Thousands of **crystal-blue ice caves** form every winter in **Vatnajökull National Park,** where characters from ***Explorer Academy: The Falcon's Feather*** are virtually transported during a training mission in the CAVE (Computer Animated Virtual Experience).

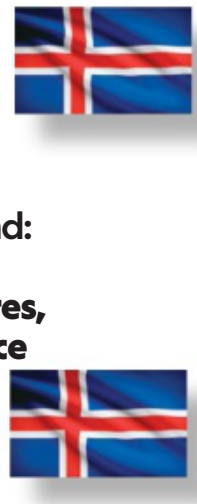
22 **Fermented shark** is the **national dish.**

23 **Appelsinusafi** means **"orange juice"** in Icelandic.

Iceland

24 The glowing **northern lights** (also known as the **aurora borealis**) are visible for more than **8 months** of the year here.

25 The **colors in the flag** represent natural elements on the island: **red for volcanic fires, white for ice fields,** and **blue for the ocean.**



Feather. BY KAY BOATNER

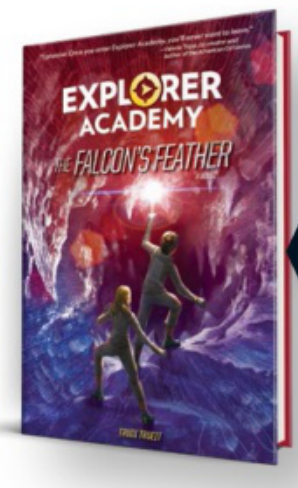
26 Iceland is **slightly smaller** than the **state of Kentucky.**

27 **Arctic foxes** were the only **native land mammals in Iceland** when it was first settled.

28 An elevator will drop you 400 feet into the **Þríhnúkagígur** (pronounced thrih-NUHK-ah-gig-ur) **volcano,** the only place in the world where you can enter a **magma chamber.**

29 Iceland has no native **reptiles** or **amphibians.**

30 Divers have found **clams nearly 400 years old** off the coast of this country.



CHECK OUT THE BOOK!

BIGANDT / SHUTTERSTOCK (16); LUCA EUGENI / SHUTTERSTOCK (17); CHRUPKA / SHUTTERSTOCK (18); MENNO SCHAEFER / SHUTTERSTOCK (19); JOHANN S. KARLSSON / GETTY IMAGES (21); IFONG / SHUTTERSTOCK (23); JAMEN PERCY / REAMSTIME (24); NIYAZZ / SHUTTERSTOCK (25); SKVOOR SHUTTERSTOCK (26); ISTOCK / DMITRY DESHEVYKH (27); ARCTIC IMAGES / ALAMY (28); KURITAFSHEEN / GETTY IMAGES (29); EYE-BLINK / SHUTTERSTOCK (30)

FUN STUFF

GAMES, LAUGHS, AND LOTS TO DO!

WIN THE BOOK! GO ONLINE JULY 9-16. natgeokids.com/august

I'M A BRAINIAC.

CAT SCIENCE

BY JODI WHEELER-TOPPEN

FIND OUT HOW FAST YOUR CAT LEARNS

Use this experiment to find out if your kitty is a smarty-pants by seeing if it can solve a puzzle faster with practice.

YOU NEED

- Small clump of tuna or other smelly treat that your cat loves
- Muffin tin
- Wiffle ball
- Clock or timer

INSTRUCTIONS

1. Show your cat the tuna or other treat. Place it in one of the holes in the muffin tin, then cover the hole with the Wiffle ball. (The holes in the ball will allow your cat to see and smell the treat.)

2. Time how long it takes your cat to move the ball and get the tuna.

3. Repeat the process three more times, and record how long it takes your cat to get to the tuna each time.

4. Compare the times. If your cat was faster on its second, third, and fourth tries, it shows that your cat is learning: It figured out how to extract the tuna quickly.

PRETO PEROLA / SHUTTERSTOCK (KITTEN, MAIN); MATTHEW RAKOLA (BALL, CAT WITH BALL)

FUNNY FILL-IN

SPRAY 'N' WASH

Ask a friend to give you words to fill in the blanks in this story without showing it to him or her. Then read out loud for a laugh.

BY KAY BOATNER

PLAY MORE FUNNY FILL-IN!
natgeokids.com/ffi

This weekend, my mother, sister, and I _____ our _____ _____
(past-tense verb) (adjective) (type of transportation)

to a car wash. As a(n) _____ waved us in, we heard a(n) _____. A huge
(type of job) (funny sound)

_____ was _____ cars! "_____!" we yelled. Using its
(animal) (verb ending in -ing) (exclamation)

_____, it wiped the back of the _____ in front of us. _____ dripped
(body part) (noun) (something gross)

from a(n) _____ strapped to its hoof as it sprayed _____ with its trunk. Then the
(noun) (noun)

creature _____ the cars with its ears. Everyone was covered in _____. Who knows
(past-tense verb) (type of liquid)

where that _____ came from—but our car has never been so
(same animal)

_____!
(adjective)

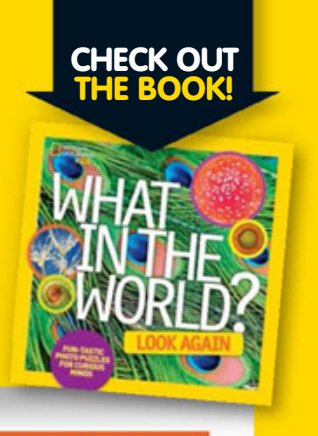
DAN SIPPLE

WHAT IN THE WORLD?

RING TOSS

These images show close-up and faraway views of items with ring shapes. Unscramble the letters to identify what's in each picture.

ANSWERS ON PAGE 32



SLAKLTBBAE TNE

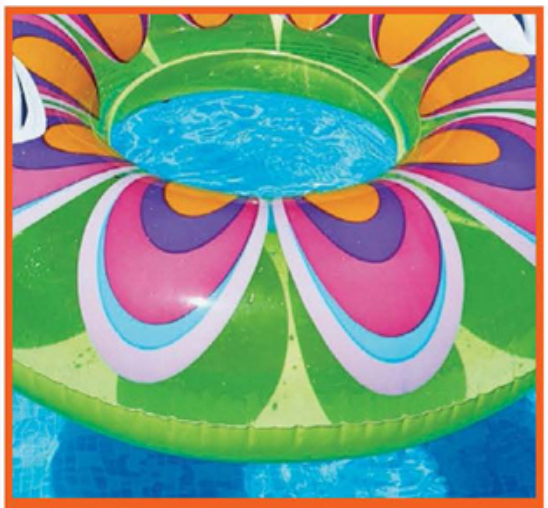
LAUH-OPOH

LNPEIPEAP

RETE KTNRU

TODHNGUU

YKE IGNR



WMSI GIRN

ODDRRATBA

UNRAST

TOP ROW (LEFT TO RIGHT): CORBIS; MAX POWER / CORBIS; SUPAPICS / ALAMY. MIDDLE ROW (LEFT TO RIGHT): ZOOM (192) TIME / IMAGEMORE / GETTY IMAGES; DEMKAT / SHUTTERSTOCK; CORBIS / JUPITERIMAGES. BOTTOM ROW (LEFT TO RIGHT): © ISTOCK / VIEWOFAMELIE; SIMPLE STOCK SHOTS; HIDETO999 / SHUTTERSTOCK.

EXPLORER ACADEMY

In the new book *Explorer Academy: The Falcon's Feather*, 12-year-old Cruz Coronado breaks secret codes in order to fight dangerous villains and solve mysteries. Test your own skills by cracking the code on this page, then check out more about the book at **ExplorerAcademy.com**.

TEXT AND PUZZLE BY GARETH MOORE

THE CODE: CAESAR CIPHER

To use this cipher, just shift every letter of the alphabet forward or backward a fixed number of spaces—you can move the entire alphabet as many spaces as you want. In this example, we shifted the alphabet just one space: *A* becomes *B*, *B* becomes *C*, and so on until you reach the end of the alphabet. Then *Y* becomes *Z*, and *Z* becomes *A*.

You can write this out as a table. The bottom row is the code, and the top letters are the translations.

A	B	C	D	E	F	G	H	I	J	K	L	M
B	C	D	E	F	G	H	I	J	K	L	M	N

N	O	P	Q	R	S	T	U	V	W	X	Y	Z
O	P	Q	R	S	T	U	V	W	X	Y	Z	A

So you could write **GOOD JOB**
like this: **HPPE KPC**

CRACK THIS CODE!

Using the Caesar cipher table above, decode the message below. **ANSWER ON PAGE 32**

C F X B S F

P G U I F

J D F .

HAIL, CAESAR!

This code got its name because according to an ancient writer, the Roman politician Julius Caesar used this simple substitute cipher to keep his letters secure.

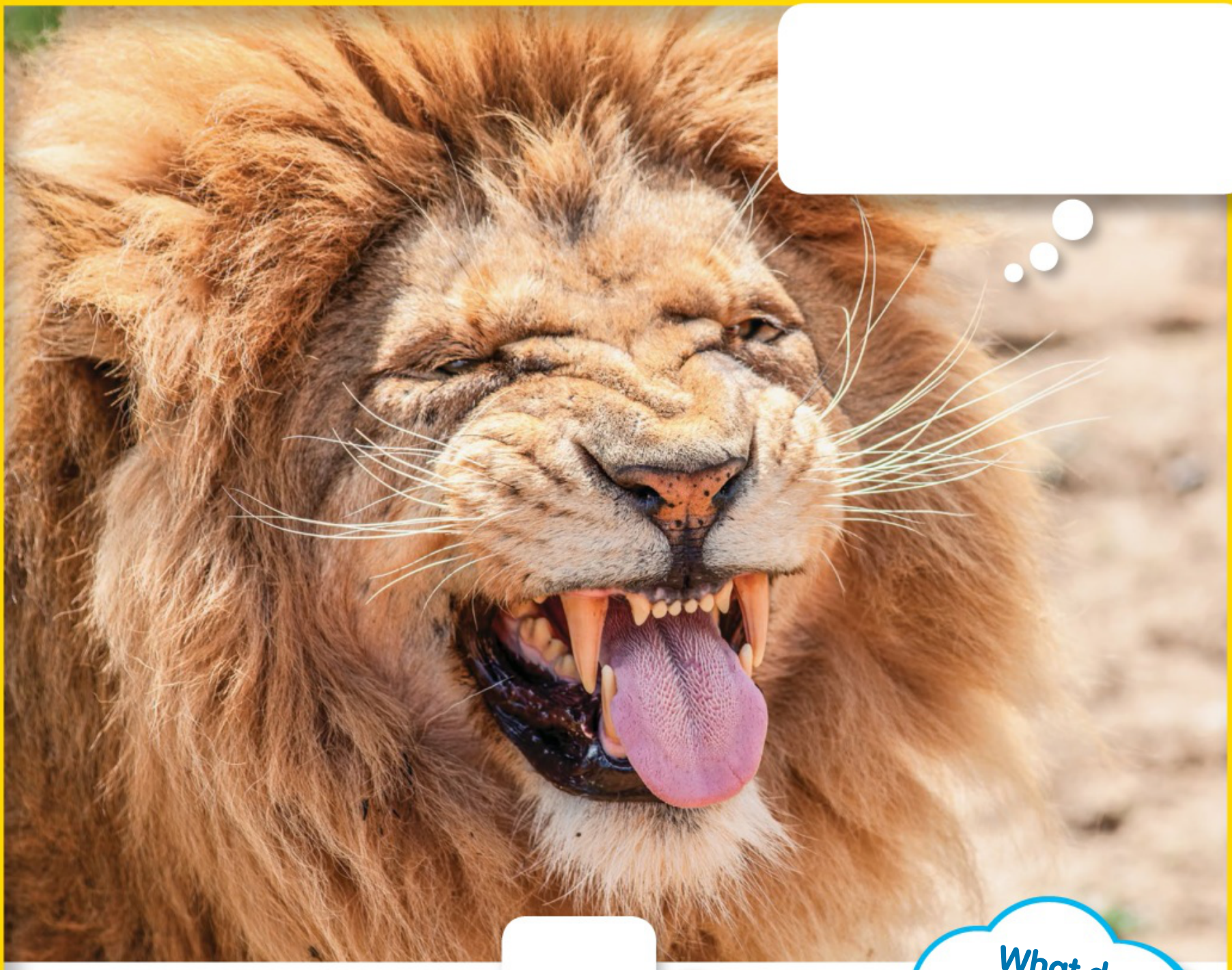
CHECK OUT THE BOOK!

BREAK MORE CODES!
ExplorerAcademy.com

RYAN ETTNER / IKON IMAGES / GETTY IMAGES (HEADER BACKGROUND); SHUTTERSTOCK (MAIN BACKGROUND); FOOTTOO / SHUTTERSTOCK (BUST); BILHA GOLAN / DREAMSTIME (TEMPLE)

BACK TALK

1. **Fill in** the thought balloon.
2. **Cut out** the entire picture (or make a photocopy of it).
3. **Mail** it along with your name, address, phone number, and date of birth to **Nat Geo Kids, Back Talk, P.O. Box 96000, Washington, DC 20090-6000.** Selection for publication in a future issue will be at the discretion of *Nat Geo Kids*.



What do YOU think this lion is thinking?

FROM THE DECEMBER 2018 / JANUARY 2019 ISSUE

Is there something on my face?
Parker T., 11
Tooele, Utah

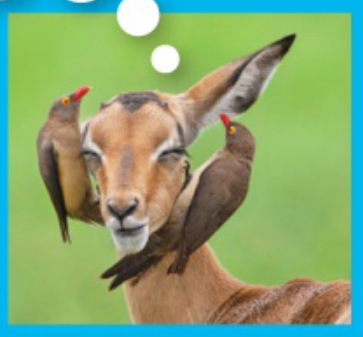
I am the bird whisperer.
Adair C., 10
Honolulu, Hawaii

I should have checked the barber's reviews.
Roman K., 12
Short Hills, New Jersey

Check out my bird earrings!
Lilly-o L., 5
Providence, Rhode Island

You guys are so *ear*-itating!
Judah B., 8
Blaine, Minnesota

Is this what people mean when they say "bird bath?"
Eliza E., 10
Winston-Salem, North Carolina



Do I look like a tree?
Marcus H., 9
Portland, Oregon

Hey, peck on someone your own size!
Faith T., 11
San Clemente, California

Answers

"What in the World?"
(page 30): **Top row:** basketball net, Hula-Hoop, pineapple. **Middle row:** tree trunk, doughnut, key ring. **Bottom row:** swim ring, dartboard, Saturn.

"Explorer Academy"
(page 31): Beware of the ice.

IAN DYBALL / SHUTTERSTOCK (LION); HEINI WEHRLE / MINDEN PICTURES (IMPALA)

kids VS. PLASTIC

Part of the PLANET OR PLASTIC? initiative

MAKE THIS PAPER BEADS TO AVOID THAT PLASTIC ART BEADS

BY ELLA SCHWARTZ

BEST BEADS

Help keep the Earth healthy by ditching some plastic items. This month, make art beads out of old paper products instead of using plastic beads, which animals might mistake for food.

MATERIALS

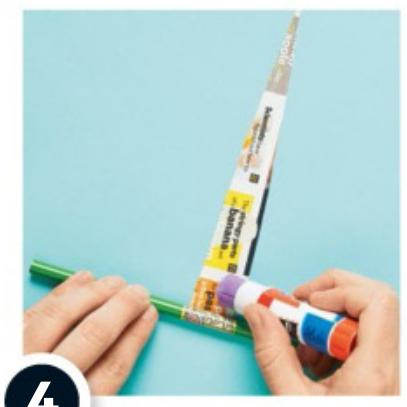
- Colorful pages from old magazines, brochures, junk mail, or newspapers
- Scissors
- Glue stick
- Round pencil, colored pencil, or crayon
- Clear nail polish

STEPS

1 Select an old magazine or other paper product and tear out a colorful page.

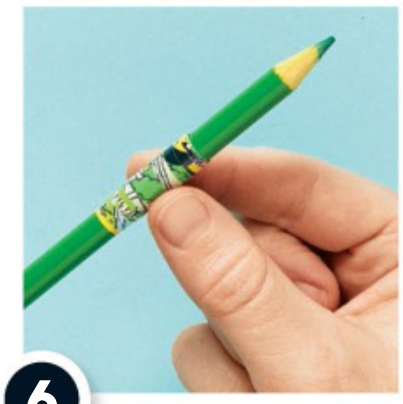
2 Cut across the page at a slight angle to make long triangular strips. (Wider strips will create wider beads.)

3 Lay one strip on a flat surface, and align the pencil horizontally against the wider edge of the paper strip. Roll the paper completely around the pencil one time.



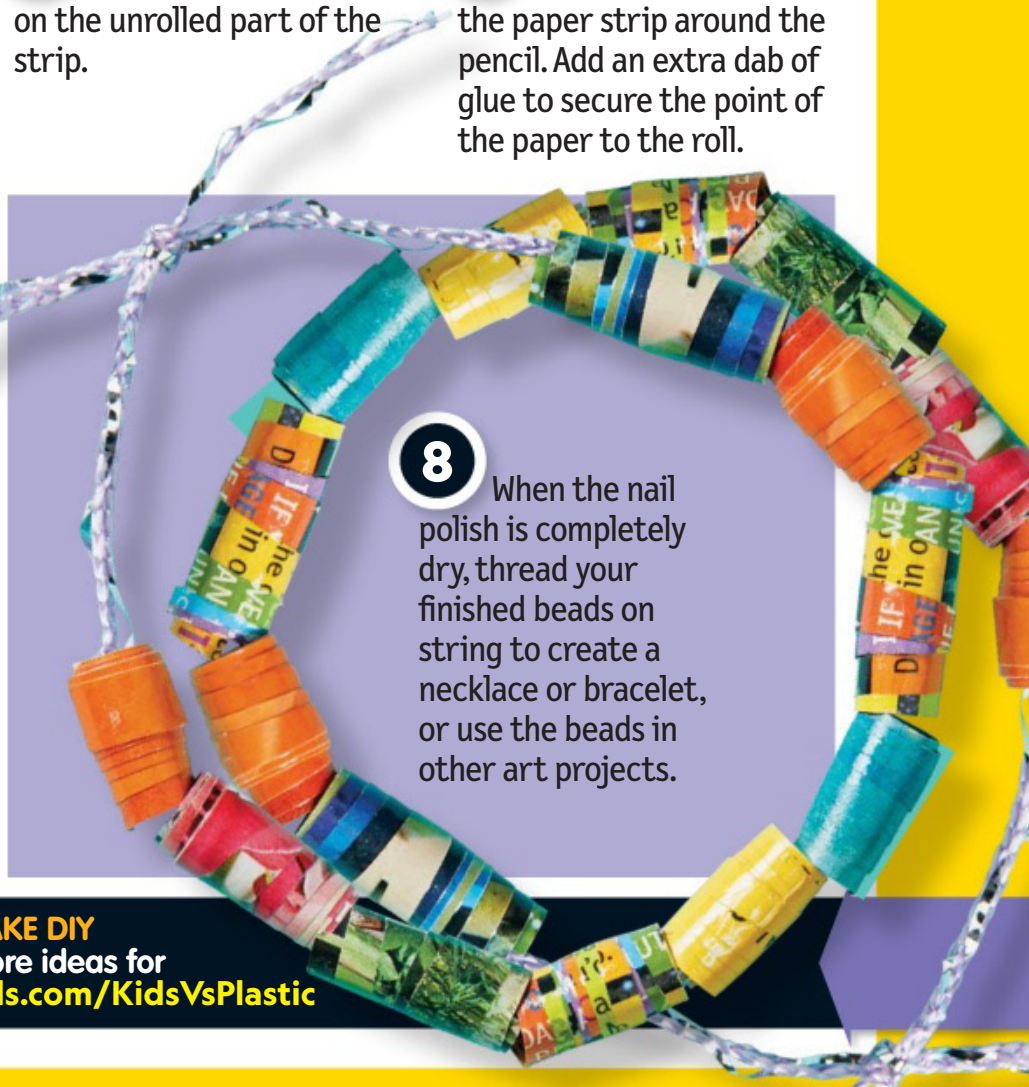
4 Put a thin coat of glue on the unrolled part of the strip.

5 Tightly roll the rest of the paper strip around the pencil. Add an extra dab of glue to secure the point of the paper to the roll.



6 Slide the rolled paper off the pencil.

7 Once the glue is dry, paint a thin layer of clear nail polish around the bead.



8 When the nail polish is completely dry, thread your finished beads on string to create a necklace or bracelet, or use the beads in other art projects.

PLANET PROTECTOR TIP Remember to recycle any leftover paper once you're done crafting.

WATCH A COOL VIDEO TO MAKE DIY JEWELRY BEADS! Then get more ideas for plastic-free crafts! **natgeokids.com/KidsVsPlastic**

REBECCA HALE / NG STAFF (PAPER BEADS, ALL); CTON (FUN STUFF ILLUSTRATION); JANE KELLY / SHUTTERSTOCK (GLOBE)

STRIKA ENTERTAINMENT

UnLeaShed

1

WIGGLE WIGGLE

WARRIOR QUEEN LULU PREPARES FOR HER POUNCE ... ONE OF THE SMOOTHEST, STEALTHIEST, MOST ACROBATIC MOVES EVER PERFORMED BY A CAT.

IN 3 ... 2 ... 1!

2

OH, NO! TOO MUCH POUNCE!

EEK!

3

UGH! IT'S SHRUB SAP!

WELL LOOKIE HERE ...

4

IT WON'T COME OFF!

5

I CAN'T ... GET ... OUT!

6

LOOKS LIKE YOU'VE GOTTEN YOURSELF INTO A REAL STICKY SITUATION.

GO AWAY, YOU GLORIFIED SQUEAKY TOY.

7

LULU? IS THAT YOU?

HELP! I'M STUCK IN SAP!

HOLD ON! I'LL GET YOU OUT.

8

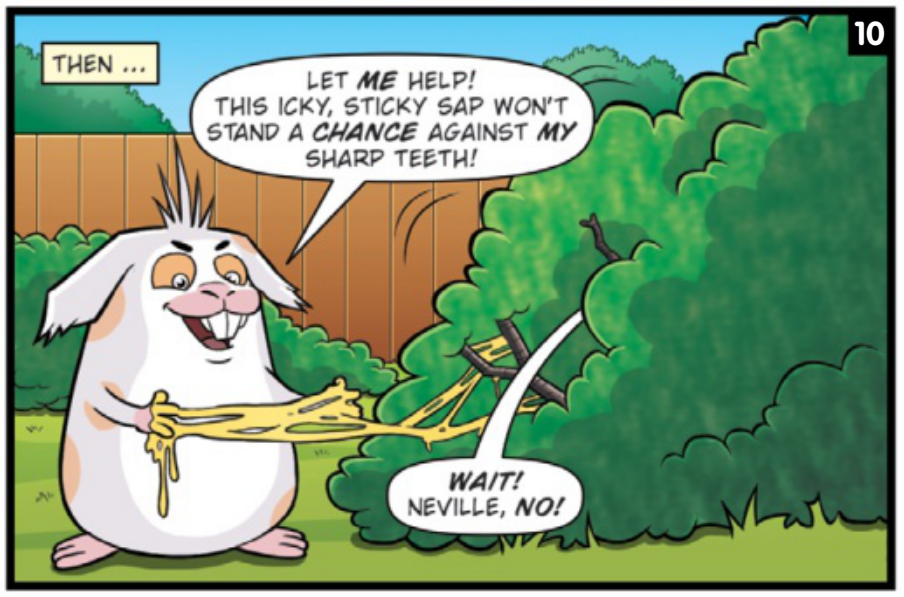
UH-OH.

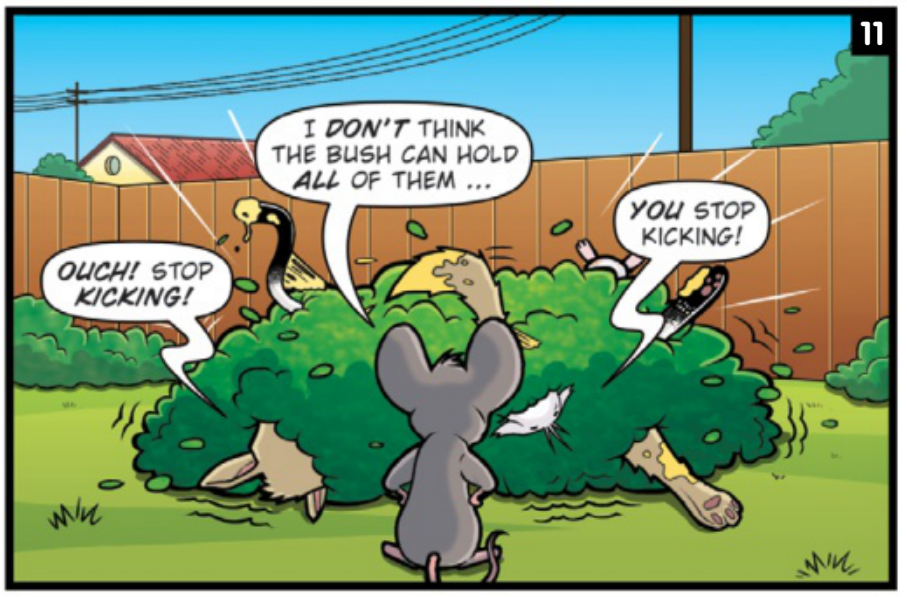
ATLAS, YOU'RE GETTING STUCK TOO!

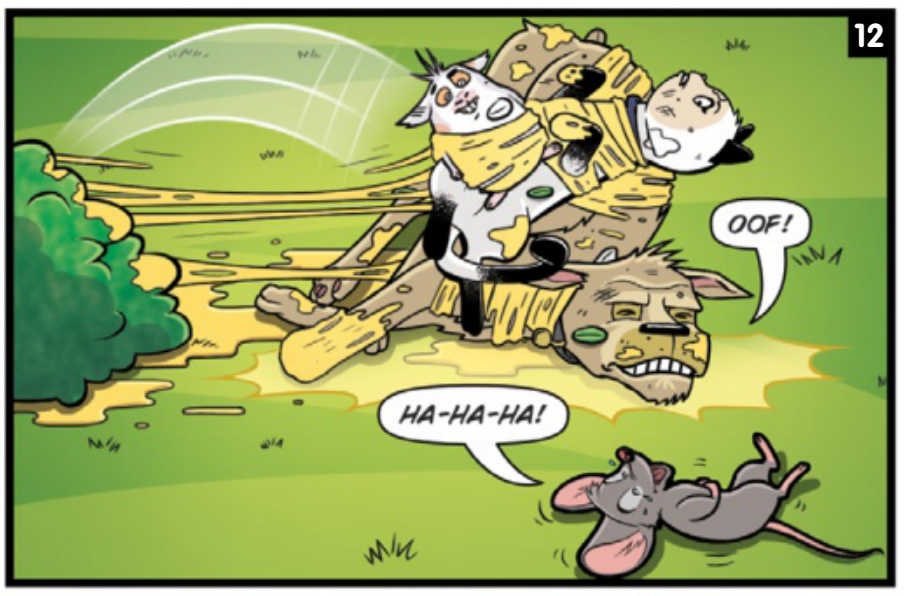
HE SHOULD HAVE "PAWSED" TO THINK THAT THROUGH!

9

LADIES AND GENTLEMEN, STEP RIGHT UP! SEE THE INCREDIBLE ANIMAL PRETZEL! HALF CAT, HALF DOG AND ALL HILARIOUS!

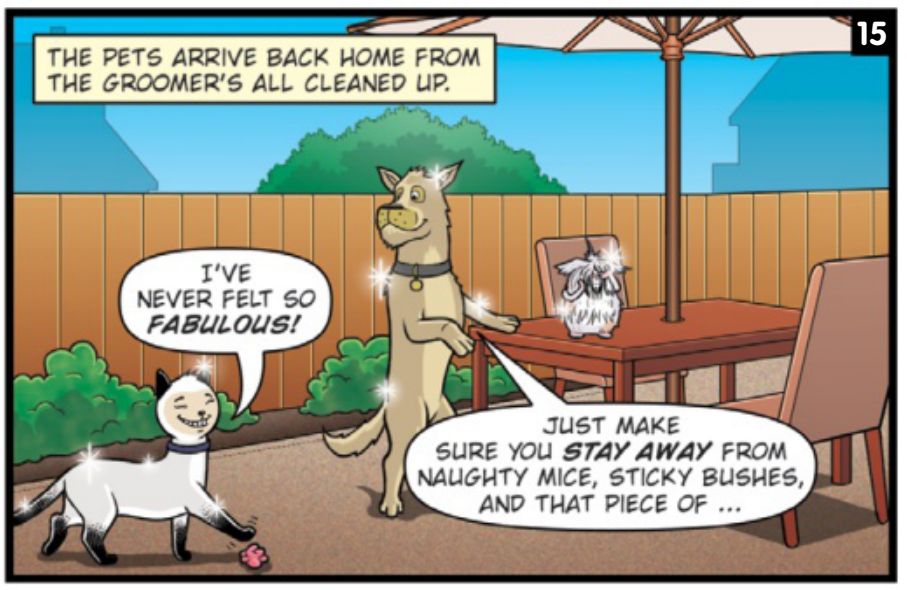

10
THEN ...
LET ME HELP! THIS ICKY, STICKY SAP WON'T STAND A CHANCE AGAINST MY SHARP TEETH!
WAIT! NEVILLE, NO!


11
I DON'T THINK THE BUSH CAN HOLD ALL OF THEM ...
OUCH! STOP KICKING!
YOU STOP KICKING!

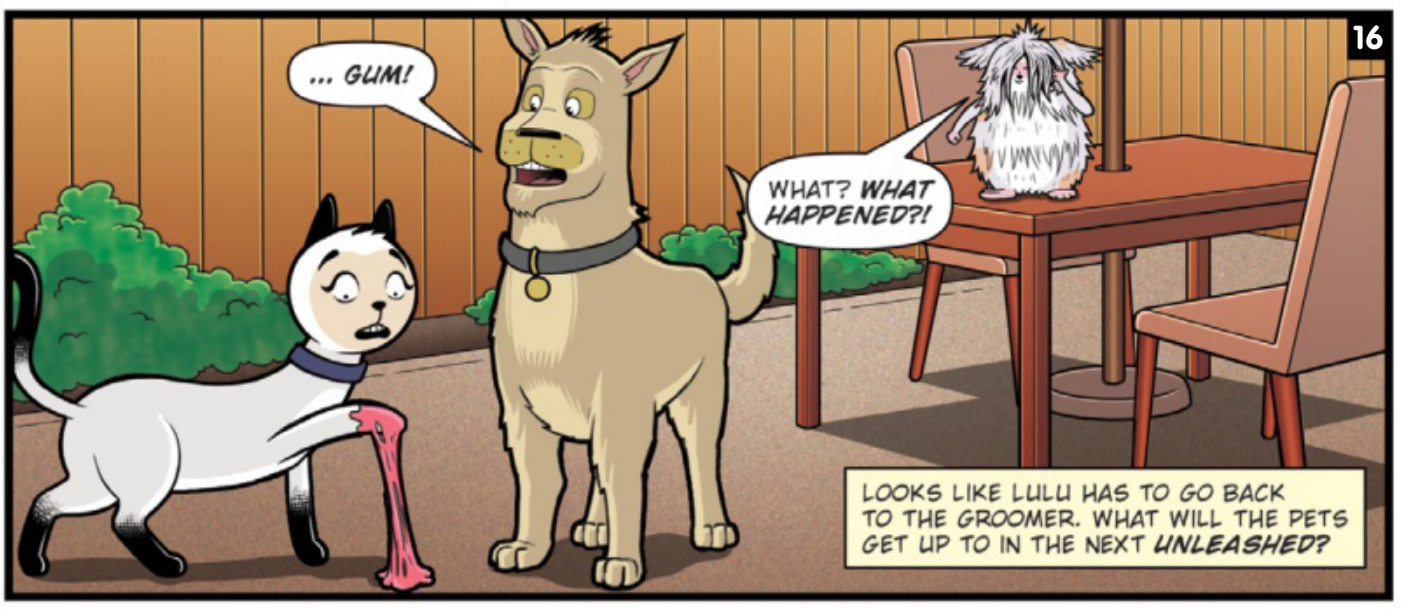

12
OOF!
HA-HA-HA!

13
SOON AFTER ...
YOU GUYS ARE A MESS!
WE NEED TO TAKE THEM TO THE GROOMER!

14
I'D OFFER TO HELP YOU, PRINCESS TALLULAH, BUT I'M ALL TIED UP.
ITH JUTHT LULU!


15
THE PETS ARRIVE BACK HOME FROM THE GROOMER'S ALL CLEANED UP.
I'VE NEVER FELT SO FABULOUS!
JUST MAKE SURE YOU STAY AWAY FROM NAUGHTY MICE, STICKY BUSHES, AND THAT PIECE OF ...

selfish


16
... GUM!
WHAT? WHAT HAPPENED?!
LOOKS LIKE LULU HAS TO GO BACK TO THE GROOMER. WHAT WILL THE PETS GET UP TO IN THE NEXT UNLEASHED?